



# EXPLORING THE CRITICAL THINKING AMONG STUDENT TEACHERS

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## ABSTRACT

Critical thinking is a base for Student Teachers to be successful in their course of study. Teachers of today's classroom are supposed to be prepared to encounter unexpected, more creative and logical questions from the learners. Hence, the investigator of this study has decided to explore the critical thinking of Student Teachers. Random samples of 500 students were selected and data was collected by using the Critical Thinking sub scale of MSLQ (1991). The investigator has given due importance to sub samples of the study. The findings of the study reveal that Student Teachers are having above average level of critical thinking. It is suggested that suitable intervention and training strategies can develop critical thinking skills of Student Teachers.

**KEYWORDS:** Critical thinking, Student Teachers, Exploratory Method

## INTRODUCTION:

Critical thinking is the objective examination and evaluation of a problem in order to form a decision. The term critical thinking is very complex to understand. There are many definitions exist, which generally include the rationale, doubtful, impartial analysis, or evaluation of truthful evidence. It is more than just thinking clearly or rationally; it's about thinking independently (Watanabe-Crockett, 2018). Critical thinking is self-directed, self-disciplined, self-monitored, and self-corrective thinking. It accepts an agreement to rigorous standards of excellence and mindful command of their use. It entails effective communication and problem-solving abilities as well as - a commitment to overcome obstacles.

Teaching critical thinking skills are necessary for our teachers to develop among the student teachers as because they're the nation builders and also it helps them to be successful in their life. As such, every teacher is looking for fascinating ways to integrate it into classrooms. But what exactly are critical thinking skills, and what are some of the best strategies, student teachers look for imparting them to learners? It must be understood by the teacher educator and it should be nurtured among the student teachers in their practice. Critical thinking is required for teachers to elevate their students' mental workflow beyond just memorization—which is really a good step forward (Cox, 2018). Critical thinking is a skill that youth will unquestionably need and exercise well beyond their school years. Professionals agree that in keeping- up with the ever-changing technological world, students will need to attain, understand, and analyse information on a much more effective manner. It is our job as educators to equip our student teachers with the strategies and skills they need to think critically in order to cope with these tech problems and obstacles they face in and out of the classroom. It is not possible for the educator without knowing the methods, to impart the critical thinking skills among the student teachers. This study aims to explore the critical thinking skills among the Student Teachers. The findings of the study will give an idea about the present condition of critical thinking among the student teachers in the study area. It also helps to understand and design effective methodology to foster the critical thinking skills.

The investigator of the study was curious to know the existing practice in teacher training, whether it really develops the critical thinking skills or not. If yes, at what extent and if not, what is the problem in the existing educational practices and methodology in transferring the skill of critical thinking. This leads the investigator, to undertake a study to explore critical thinking among the Student Teachers in the study area. The findings of the study not only help the investigator alone, but also help other researchers, policy makers and educators. They can make use of the findings to understand the level and to work out for developing the critical thinking skills. Therefore, the present study has high need and importance at this juncture.

## REVIEW OF LITERATURE:

Cottrell (2005) says that learning to think in critically analytical and evaluative ways means using mental processes such as attention, categorisation, selection, and judgement. Analysis, implication, synthesis, evaluation, application and use of skills to plan the outcome in a situation are seen as fundamental for critical thinking.

Paul and Elder (2006) define problem-solving “the process of reaching solutions”, and creative thinking as, “resulting from originality of thought” Critical thinking is one among the family of closely related forms of higher order think-

ing, for example, problem solving, decision making and creative thinking.

Brookfield (2008) ascertains that students can be taught to recognize, use skills appropriately and make their thinking more effectively.

Slavin (2009) stated that the development of critical thinking skills requires that a teacher be an effective “intentional teacher” who is thoughtful, reflective, and prepared. He revealed that the ideal teacher incorporates critical thinking into content delivery.

Mulnix (2012) states it is important that critical thinking should not be confused with other forms of thought. She enquired whether critical thinking and reasoning hold a privileged position in respect to knowledge over other thought processes such as problem solving, creative thinking and decision making.

Deckert & Wood (2013) explain Socratic questioning in class helps to draw the information on any topic from the students through the arguments and class discussions. Asking questions is a way to know that students are thinking critically in that subject area/

Faulkner and Crowhurst (2014) contest about students who arrive holding pre-conceived values and beliefs in opposition to the objectives of the socially critical course. Mere engagement with course materials and activities will not help students prove beneficial to shift feelings and attitudes.

Murris (2014) puts forth that for some students, it is for the first time at university that they have to genuinely mix, explore ideas with other races, religions and cultures, which may lead to great disturbance. Questioning for reasons, seeking alternatives, being open-minded are considered derogatory in certain cultures

Grantham, Robinson and Chapman (2015) concluded that teachers' approachability and frequent interaction with students help to elevate confidence and academic skills of students.

## OBJECTIVES OF THE STUDY:

- To study the level of Critical Thinking among the Student Teachers
- To find out the significance of the difference between selected study variables on Critical Thinking with respect to their demography variables

## HYPOTHESES OF THE STUDY:

- There will be no significant difference between male and female student teachers in their Critical Thinking
- There will be no significant difference between student teachers who belong to below 25 years and above 25 years of age in their Critical Thinking
- There will be no significant difference between rural and urban student teachers in their Critical Thinking
- There will be no significant difference between Arts and Science group student teachers in their Critical Thinking

## METHODOLOGY & SAMPLE:

The method used for the study was exploratory research, which will help the

researcher to explore the present condition of the participants of the study in their critical thinking.

For this study, the investigator used simple random sample technique to collect data from the 500 Student Teachers studying in the Colleges of Education situated in and around Kumbakonam of Thanjavur District, Tamilnadu. In this study due importance was given to sub samples of the study.

#### Instrument and Procedures:

To measure the critical thinking of the participants, the investigator used a sub scale of the tool, i.e. Motivated Strategies for Learning Questionnaire (MSLQ) developed by Pintrich, Smith, Garcia and McKeachie (1991). This sub scale has five statements and each statement in the sub scale was designed to be rated on a 5-point rating. A value of 1 point was assigned to the response 'not at all true of me' to 5 points for 'very true of me'. So, the maximum score for the tool will be 25 and the minimum score will be 05. Therefore, a score range be 5 – 10 indicates a low level of critical thinking, 11 – 15 indicates below average, 16 – 20 indicates above average and a score above 20 indicates a high level of critical thinking.

#### Statistical techniques:

To analyse the data collected from the sample, the following appropriate statistical analysis has been done, Measures of central tendency and the mean difference analysis i.e. 't' test was used. The analysed data and interpretation of the same was given in the succeeding paragraph.

#### RESULTS AND DISCUSSION:

**Table 1: Shows the Mean, S.D. and 't' values of Student Teachers on critical thinking.**

Variable	Sample	Critical Thinking				
		N	M	SD	"t"	LS
Gender	Male	84	18.95	3.11	1.017	NS
	Female	416	18.57	3.15		
Age Group	25 & Less	349	18.49	3.38	1.590	NS
	Above 25	151	18.97	2.78		
Locale	Rural	353	18.58	3.16	0.618	NS
	Urban	147	18.77	3.13		
Education	Arts Group	202	18.69	3.01	0.317	NS
	Science Group	298	18.60	3.24		
Total	500	18.63	3.14	--	--	

Source: Primary data computed

The calculated mean and standard deviation values are found to be 18.63 and 3.14 respectively. The calculated mean value is higher than the percentile 50 but less than percentile 75. Hence, it is inferred that Student Teachers have above average level of critical thinking. The calculated SD value indicates the dispersion of the scores is narrow, which means the group has been consistent in their level of critical thinking. Further, the calculated mean values of different sub samples range from 18.49 to 18.95. These values are between Q2 and Q3. Hence, it indicates that irrespective of sub samples, Student Teachers have above average level of critical thinking.

The calculated critical values are found to be 1.017, 1.590, 0.618 and 0.317 respectively, for gender, age group, locale and education. These values are not significant at 0.05 levels. Therefore, it is inferred that there is no significant mean difference between the selected sub sample of gender, age group, locale and education in their critical thinking.

#### FINDINGS:

1. Student Teachers have above average level of critical thinking.
2. Irrespective of sub samples, Student Teachers have above average level of critical thinking.
3. There is no significant mean difference between male and female Student Teachers in their critical thinking
4. There is no significant mean difference between Student Teachers who belong to below 25 years and more than 25 years of age in their critical thinking
5. There is no significant mean difference between rural and urban Student Teachers in their critical thinking
6. There is no significant mean difference between arts and science group Student Teachers in their critical thinking

#### DISCUSSION:

The critical thinking skills of the student teachers are above average level, but not

in the high level. So, the existing curriculum, teaching practice, training and development may be developed to a maximum level to create the student teachers to obtain very high levels of critical thinking. Many teacher educators have long advocated the teaching of critical thinking skills such as reasoning and problem solving. To improve student teachers' performance on critical thinking tests, Schools of Education must improve teacher training. They must teach cognitive skills to pre-service teachers before training them to teach these skills in the classroom (Ashton, 1980). They must integrate critical thinking skills into all aspects of teacher preparation and train future teachers to be models of effective thinking strategies (Walsh and Paul, 1988). The male and female Student Teachers do not differ significantly in their critical thinking. This finding was coincided with the finding of the study conducted by (Rafiee, 2016). There is no difference found among the rural and urban area Student Teachers in their critical thinking, but the study conducted by Mohan Rathakrishnan in the year 2017 concluded that urban participants have better critical thinking than their counterparts. Critical thinking is one of the important skills that is necessary for the future teachers. Hence, suitable intervention strategies should be adopted to develop the skill of critical thinking among the Student Teachers.

#### CONCLUSION:

The study attempted by the investigator concluded that Student Teachers are having above average level of critical thinking. Critical thinking is one of the important skills that is necessary for the future teachers. Hence, suitable intervention strategies should be adopted to develop the skill of critical thinking among the Student Teachers.

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